Intellectual Property Administration
P. O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 10992614 -1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Donald J. Stavely et al

Confirmation No.: 1314

Application No.: 09/955457

Examiner: Chriss S. Yoder

Filing Date: Sep 17, 2001

Group Art Unit: 2612

Title: System And Method For Simulating Fill Flash In Photography

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on herewith.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) $500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

( )	one month	$120.00
( )	two months	$450.00
( )	three months	$1020.00
( )	four months	$1590.00

08/18/2005 MBINAS 00000019 082025 09955457
02 FC:1402 500.00 DA

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

( ) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: _____

OR

(X) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (571) 273-8300 on Aug. 17, 2005

Number of pages: 16

Typed Name: Donna M Kraft

Signature: Donna M Kraft

Respectfully submitted,

Donald J. Stavely et al

By David W. Boyd

David W. Boyd

Attorney/Agent for Applicant(s)
Reg. No. 50,335

Date: Aug. 17, 2005

Telephone No.: 970 898 4475

HEWLETT-PACKARD COMPANY
IP Administration, mail stop 35
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 10992614-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):	Stavely et al.
Serial No.:	09/955,457
Examiner:	Chriss S. Yoder III
Filing Date:	9/17/2001
Group Art Unit:	2612
Title:	System and method for simulating fill flash in photography

THE ASSISTANT COMMISSIONER OF PATENTS
Washington, D.C. 20231

BRIEF ON APPEAL

INTRODUCTION

Pursuant to the provisions of 37 CFR § 1.191 *et seq.*, applicants hereby appeal to the Board of Patent Appeals and Interferences from the examiner's rejection dated 07/15/2005. The claims in question have been finally rejected. This brief on appeal is accompanied by the requisite fee (37 CFR 1.192(a) and 1.17(f)).

REAL PARTY IN INTEREST

The entire interest in the present application has been assigned to Hewlett-Packard Development Company, L.P., as recorded at Reel 014061, Frame 0492.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1-24 are pending in the application.

Claims 1-24 stand finally rejected, and are the subject of this appeal.

STATUS OF AMENDMENTS

No amendments have been filed after the final rejection mailed June 6, 2005.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 is directed to a method of simulating fill flash in a camera system, which is described in the specification at least at page 3 lines 14-21, page 10 lines 16-24, page 11 lines 3-5, page 11 line 23 through page 12 line 22, and Figure 9. The method includes determining distances from a camera to objects in a scene (901), taking a photograph without using a flash (908), and selectively adjusting the brightness or regions in the photograph based on the distance information (909).

Claim 7 is directed to a camera system that simulates fill flash. The camera system is described in the specification at least at page 4 line 17 through page 6 line 12, and in Figure 1. The camera system simulates fill flash by performing the steps of the method of claim 1.

Claim 14 is directed to a camera, which is described in the specification at least at page 4 line 17 through page 6 line 12, and in Figure 1. The camera comprises means for performing the steps of the method of claim 1 for simulating fill flash.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1, 7, and 14 are unpatentable under 35 U.S.C. § 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141).
2. Whether claims 2-4, 8-11, 23, and 24 are unpatentable under 35 U.S.C. § 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141) in view of Parulski et al. (U.S. Pat. No. 5,563,658).
3. Whether claims 5, 6, 12, and 13 are unpatentable under 35 U.S.C. § 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141) in view of Miyadera (U.S. Pat. No. 5,550,587).
4. Whether claims 15-22 are unpatentable under 35 U.S.C. § 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141) in view of Kikuchi (U.S. Pat. No. 6,757,020).

REJECTION OF CLAIMS 1, 7, AND 14 UNDER 35 U.S.C. § 103(a)

The examiner has rejected claims 1, 7, and 14 as being unpatentable under 35 U.S.C.

§ 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141). Applicant respectfully submits that the rejection is improper because the examiner has not made out a *prima facie* case of obviousness.

A. Applicable law

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of the ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

The teaching or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. MPEP 2143 citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim dependent therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Without conceding any other elements required to establish a *prima facie* case of obviousness, Applicant respectfully submits that Nishimura et al. do not teach or suggest all the limitations of Applicant's claims 1, 7, and 14.

B. Claim 1

Claim 1 recites a method comprising in part selectively adjusting the brightness of regions of the photograph based on the distance information.

Nishimura et al. do not teach this claim element. In support of the rejection, the examiner cites column 5 line 52 through column 7 line 17 of Nishimura et al. While part of the cited passage does describe exposure control, no mention is made of selectively adjusting the brightness of regions of the photograph. The system of Nishimura et al. uses a different "detection characteristic" to set exposure depending on scene "ambience". (Nishimura et al. column 7 lines 14-17.) Exposure is controlled using a "stop" (Nishimura et al. column 2 lines 10-14 and column 3 lines 48-49) or an exposure time (column 4 lines 5-9). As is well known, a controlling exposure using either a stop, or an exposure time, or both affects the

exposure of an entire photograph substantially uniformly. Different regions of the photograph are not affected selectively by Nishimura et al.

Applicant respectfully notes that the "regions" depicted in Figure 4 of Nishimura et al. are not regions of a photograph. Nishimura's Figure 4 is not a map of a scene or photograph, but is an abstract construct for categorizing a particular scene based on measurements of the subject illumination and a background distance. A particular location in the "map" of Nishimura et al. does not correspond to a particular location in a scene, but indicates a characteristic of the entire scene. (Nishimura et al. column 5 lines 18-51, column 2 lines 54-62, and Figure 4.)

C. Claim 7

Claim 7 is an apparatus claim to a camera system that simulates fill flash by performing the steps of the method of claim 1. Because, as is shown above, Nishimura et al. do not teach or suggest all of the limitations of Applicant's claim 1, they similarly do not teach or suggest all of the limitations of Applicant's claim 7.

D. Claim 14

Claim 14 is an apparatus claim to a camera that comprises means for performing the steps of the method of claim 1. Because, as is shown above, Nishimura et al. do not teach or suggest all of the limitations of Applicant's claim 1, they similarly do not teach or suggest all of the limitations of Applicant's claim 14.

Because Nishimura et al. do not teach or suggest all of the limitations of Applicant's claims 1, 7, and 14, the examiner's *prima facie* case of obviousness fails. Reversal of the rejection is respectfully requested.

REJECTION OF CLAIMS 2-4, 8-11, 23, AND 24 UNDER 35 U.S.C. § 103(a)

The examiner has rejected claims 2-4, 8-11, 23, and 24 as being unpatentable under 35 U.S.C. § 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141) in view of Parulski et al. (U.S. Pat. No. 5,563,658). Applicant respectfully submits that the rejection is improper because the examiner has not made out a *prima facie* case of obviousness. Without conceding any other elements required to establish a *prima facie* case of obviousness,

Applicant respectfully submits that the combination of Nishimura et al. and Parulski et al. does not teach or suggest all the limitations of these claims.

A. Claims 2-4 and 23

Applicant's claims 2-4 and 23 depend from claim 1 and add further limitations. Claim 1 is shown above to be patentable over Nishimura et al. because Nishimura et al. do not teach or suggest selectively adjusting the brightness of regions of the photograph based on the distance information. Parulski et al. do not supply this element, and therefore the combination of Nishimura et al. and Parulski et al. does not teach or suggest all of the limitations of claims 2-4 and 23.

B. Claims 8-11 and 24

Applicant's claims 8-11 and 24 depend from claim 7 and add further limitations. Claim 7 is shown above to be patentable over Nishimura et al. because Nishimura et al. do not teach or suggest selectively adjusting the brightness of regions of the photograph based on the distance information. Parulski et al. do not supply this element, and therefore the combination of Nishimura et al. and Parulski et al. does not teach or suggest all of the limitations of claims 8-11 and 24.

Because Nishimura et al. and Parulski et al. in combination do not teach or suggest all of the limitations of Applicant's claims 2-4, 8-11, 23, and 24, the examiner's *prima facie* case of obviousness fails. Reversal of the rejection is respectfully requested.

REJECTION OF CLAIMS 5, 6, 12, AND 13 UNDER 35 U.S.C. § 103(a)

The examiner has rejected claims 5, 6, 12, and 13 as being unpatentable under 35 U.S.C. § 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141) in view of Miyadera (U.S. Pat. No. 5,550,587). Applicant respectfully submits that the rejection is improper because the references used in the rejection are improperly combined, and because even if the references are combined, the examiner has not made out a *prima facie* case of obviousness.

A. Improper combination of references

It is improper to combine references where the references teach away from their

combination. MPEP 2145 citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)

Applicant's claim 5 recites in part adjusting the brightness of regions of a photograph (a limitation present in Applicant's claim 5 by virtue of its dependence on claim 1). As is described at column 7 line 65 through column 8 line 43 of Miyadera, Miyadera's method of adjusting white balance involves computing gains based on a weighted average of the gains used for performing white balance under pure flash illumination (AR1 and AB1) and under pure ambient daylight (AR2 and AB2). Applicant notes that in all of the examples given, the weightings of these gains sum to unity, apparently so that white balance is adjusted without affecting brightness. In other words, Miyadera endeavors to preserve brightness rather than adjust it. Because Miyadera teaches away from applicant's method, the combination of Miyadera with other art in establishing obviousness is improper.

B. Even if combined, the referenced do not support a *prima facie* case

Without conceding any other elements required to establish a *prima facie* case of obviousness, Applicant respectfully submits that the combination of Nishimura et al. and Miyadera does not teach or suggest all the limitations of claims 5, 6, 12, and 13.

i. Claims 5 and 6

Applicant's claims 5 and 6 depend from claim 1 and add further limitations. Claim 1 is shown above to be patentable over Nishimura et al. because Nishimura et al. do not teach or suggest selectively adjusting the brightness of regions of the photograph based on the distance information. Miyadera does not supply this element, and therefore the combination of Nishimura et al. and Miyadera does not teach or suggest all of the limitations of claims 5 and 6.

In particular regard to Applicant's claim 5, claim 5 recites in part the method of claim 1 wherein regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera. The examiner relies on Miyadera to teach this claim limitation, citing column 14 lines 1-6 of Miyadera. The cited passage does not support the rejection. The cited passage describes "controlling a coefficient" used in "white balance adjustment" based on "image-object distance". Applicant first notes that white balance adjustment is not the same as lighten[ing] regions in a

photograph.

And, as is explained above, Miyadera endeavors to preserve brightness, not adjust it, and therefore does not describe a method in which regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera.

ii. Claims 11 and 12

Applicant's claims 12 and 13 depend from claim 7 and add further limitations. Claim 7 is shown above to be patentable over Nishimura et al. because Nishimura et al. do not teach or suggest selectively adjusting the brightness of regions of the photograph based on the distance information. Miyadera does not supply this element, and therefore the combination of Nishimura et al. and Miyadera does not teach or suggest all of the limitations of claims 12 and 13.

Because Nishimura et al. and Miyadera are improperly combined, and because even when combined they do not teach or suggest all of the limitations of Applicant's claims 5, 6, 12, and 13, the examiner's *prima facie* case of obviousness fails. Reversal of the rejection is respectfully requested.

REJECTION OF CLAIMS 15-22 UNDER 35 U.S.C. § 103(a)

The examiner has rejected claims 15-22 as being unpatentable under 35 U.S.C. § 103(a) over Nishimura et al. (U.S. Pat. No. 5,617,141) in view of Kikuchi (U.S. Pat. No. 6,757,020). Applicant respectfully submits that the rejection is improper because the examiner has not made out a *prima facie* case of obviousness. Without conceding any other elements required to establish a *prima facie* case of obviousness, Applicant respectfully submits that the combination of Nishimura et al. and Kikuchi does not teach or suggest all the limitations of these claims.

A. Claims 15-18

Applicant's claims 15-18 depend from claim 1 and add further limitations. Claim 1 is shown above to be patentable over Nishimura et al. because Nishimura et al. do not teach or suggest selectively adjusting the brightness of regions of the photograph based on the distance

information. Kikuchi does not supply this element, and therefore the combination of Nishimura et al. and Kikuchi does not teach or suggest all of the limitations of claims 15-18.

B. Claims 19-22

Applicant's claims 19-22 depend from claim 7 and add further limitations. Claim 7 is shown above to be patentable over Nishimura et al. because Nishimura et al. do not teach or suggest selectively adjusting the brightness of regions of the photograph based on the distance information. Kikuchi does not supply this element, and therefore the combination of Nishimura et al. and Kikuchi does not teach or suggest all of the limitations of claims 19-22.

Because Nishimura et al. and Kikuchi in combination do not teach or suggest all of the limitations of Applicant's claims 15-22, the examiner's *prima facie* case of obviousness fails. Reversal of the rejection is respectfully requested.

Conclusion

In view of the above, applicant respectfully requests that all of the examiner's claim rejections be reversed.

Respectfully submitted,

By David W. Boyd

David W. Boyd
Reg. Number 50,335

August 12, 2005
Fort Collins, CO 80525
(970) 898-4475

CLAIMS APPENDIX

1. A method of simulating fill flash in a camera system comprising the steps of:

   determining distances from the camera to objects in a scene;

   taking a photograph of the scene without using a flash; and

   selectively adjusting the brightness of regions of the photograph based on the distance information.

2. The method of claim 1 wherein determining the distances from the camera to objects in the scene comprises:

   taking a series of photographs with the camera configured to focus on objects at various distances from the camera; and

   analyzing the series of photographs and corresponding focus distances.

3. The method of claim 2 wherein the analysis of the series of photographs comprises computing a spatial contrast metric.

4. The method of claim 3 wherein determining the distances to objects at locations in the scene further comprises:

   locating the particular photograph in the series of photographs with the spatial contrast metric indicating that objects at that location in the scene ~~in~~ are more nearly in focus in that particular photograph than in any other in the series of photographs; and

   identifying the distance from the camera to objects at that location in the scene as the focus distance stored in connection with that particular photograph.

5. The method of claim 1 wherein regions containing objects closer to the camera are lightened in the resulting photograph in relation to regions containing objects farther from the camera.

6. The method of claim 5 wherein regions are modified in the resulting photograph in accordance with the inverse square law.

7. A camera system which simulates fill flash by:

determining distances from the camera to objects in a scene; ~~and~~

taking a photograph of the scene without using a flash; and

selectively adjusting the brightness of regions of the photograph based on the distances.

8. The camera system of claim 7 wherein the determining the distances from the camera to objects in the scene comprises:

taking a series of photographs with the camera configured to focus on objects at various distances from the camera; and

analyzing the series of photographs and corresponding focus distances to determine the object distances.

9. The camera system of claim 8, further comprising a computer separate from the camera, and wherein the series of trial photographs and their focus distances are transmitted to the separate computer for analysis and the simulation of fill flash.

10. The camera system of claim 8 wherein the analysis of the series of photographs comprises computing a spatial contrast metric.

11. The camera system of claim 8 wherein determining the distances to objects at locations in the scene further comprises:

locating the particular photograph in the series of photographs with the spatial contrast metric indicating that objects at that location in the scene are more nearly in focus in that particular photograph than in any other in the series of photographs; and

identifying the distance from the camera to objects at that location in the scene as the camera focus distance stored in connection with that particular photograph.

12. The camera system of claim 7 wherein the system lightens regions containing objects closer to the camera in the resulting photograph in relation to regions containing objects farther from the camera.

13. The camera system of claim 12 wherein the system modifies the brightness of regions in the resulting photograph in accordance with the inverse square law.

14. A camera, comprising:

means for determining distances from the camera to objects in a scene; ~~and~~

means for taking a photograph without using a flash; and

means for selectively modifying the brightness of regions in the resulting photograph based on the distances.

15. The method of claim 1, further comprising varying the amount of brightness adjustment in response to a user control.

16. The method of claim 15, wherein the user control is comprised in the camera.

17. The method of claim 15, further comprising displaying the effect of the brightness adjustment on a display.

18. The method of claim 17, wherein the display is comprised in the camera.

19. The camera system of claim 7, wherein the camera system further simulates fill flash by varying the amount of brightness adjustment in response to a user control.

20. The camera system of claim 19, wherein the user control is comprised in the camera.

21. The camera system of claim 7, wherein the camera system further simulates fill flash by displaying the effect of the brightness adjustment on a display.

22. The camera system of claim 21, wherein the display is comprised in the camera.

23. The method of claim 2, wherein one of the series of photographs taken in determining the distances from the camera to objects in the scene is used as the photograph in which the brightness of regions is selectively adjusted.

24. The camera system of claim 8, wherein one of the series of photographs taken in determining the distances from the camera to objects in the scene is used as the photograph in which the brightness of regions is selectively adjusted.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.